

## CLAIMS

What is claimed is:

1. An external component of a cochlear implant hearing system, comprising:  
a speech processor module comprising a housing and processing circuitry that receives signals output by a microphone; and  
a protective case;  
wherein said speech processor unit is removably mountable within said case and operable while mounted therein.
2. The external component of claim 1, wherein said case comprises:  
a base member; and  
a cover member matable with said base member to form an enclosure,  
wherein when said cover member and said base member are attached to each other, said case is at least resistant to fluid ingress.
3. The external component of claim 1, wherein said speech processor module is configured to receive signals output from an internal microphone mounted on or within said housing of said speech processor module.
4. The external component of claim 3, wherein said speech processor module is configured to receive and process signals generated by a microphone external to said speech processor module.
5. The external component of claim 4, wherein said speech processor module is configured to be operably connected to a power supply.
6. The external component of claim 5, wherein a second connector is provided on either of said housing or said power supply to provide suitable electrical transmission between said power supply and said speech processor module.
7. The external component of claim 1, wherein said case is adapted to prevent all fluid ingress when said cover member is closed relative to said base member.

8. The external component of claim 1, wherein said case is adapted to at least substantially prevent dust ingress when said cover member and said base member are mated to each other.
9. The external component of claim 2, wherein said case further comprises:  
a sheath with a gasket around the perimeter thereof that overlies said speech processor module when said speech processor module is mounted in said base member, wherein said gasket and sheath, when in position, can seal with a perimeter wall of said base member.
10. A protective case for a speech processor unit of a hearing prosthesis, comprising:  
a base member for removably receiving a dual-mode speech processor module operable in a stand-alone mode of operation and a body-worn mode of operation; and  
a cover member adapted to mate with said base member to form said protective case, wherein said speech processor module implements in said body-worn mode of operation when mounted in said base member.
11. The protective case of claim 10, wherein when the cover member is closed relative to the base member, the case can be at least resistant to fluid ingress.
12. The protective case of claim 10, wherein said case is adapted to prevent fluid ingress when said cover member is closed relative to said base member.
13. The protective case of claim 12, wherein said case is adapted to at least substantially prevent dust ingress when the cover member is closed relative to the base member.
14. A speech processor module configured to operate as a component of a stand-alone speech processing unit and as a component of a body-worn speech processing unit.
15. The speech processor module of claim 14, where said stand-alone speech processing unit is a behind-the-ear (BTE) speech processing unit.

16. The speech processor module of claim 14, comprising:

An operational mode controller configured to select functional components internal to speech processor module or functional components implemented in an external component system other than said speech processor module based on whether said speech processor module is to be implemented in said stand-alone mode of operation or said body-worn mode of operation.

17. The speech processor module of claim 16, where said operational mode controller determines said operational mode of said speech processor based on an identifying feature of a power supply connected to said speech processor module.

18. A speech processor module configured to be implemented in more than one mode of operation of a hearing prosthesis including as a component of a stand-alone speech processing unit, and as a component of a body-worn speech processing unit, wherein said body-worn speech processing unit comprises a case that protects the speech processor module from environmental conditions which can damage said speech processor module implemented in said stand-alone operating mode.